

# *The Analysis of Weber's Law in Product Marketing Strategy: Taking Coca Cola as Evidence*

Keyi Zhao<sup>1,a,\*</sup>

<sup>1</sup>College of Art and Science, Boston University, Boston MA 02215, USA

a. annie403@bu.edu

\*corresponding author

**Abstract:** Transaction marketing is a business strategy that focuses on a single "point of sale" transaction. A transaction marks a financial agreement between two parties in which one party receives a financial benefit from the sale of goods and services to the other party. The way to obtain goods in modern society is usually inseparable from transactions, maximizing profits and obtaining more property has become the goal of many businessmen. However, obtaining benefits is not a simple science. It needs to be analyzed from different fields such as cost, research and development, publicity and the focus of this research: buyer psychology. This research paper analyzes the combination of mental accounting and the application of Weber's law in the market through examples of The Coca-Cola Company's development in the Chinese market. Using data and statistical methods to analyze the sales market and sales channels. Finally, it summarizes the suggestions and strategies of Coca-Cola's price increase, price reduction, sales methods and sales channels to provide a reference for sellers, so as to maximize the seller's benefits.

**Keywords:** Weber's law, mental accounting, market price

## 1. Introduction

Transaction is a necessity for people to communicate in modern society. Through trading, people can provide each other with what they need. So how much should people value the commodity when making a transaction? Kasavan believes that since commodities are traded on exchanges, their prices aren't set by a single individual or entity. Just like equity securities, commodity prices are primarily determined by the forces of supply and demand in the market [1]. There is so much research and opinions on the price just to get the satisfaction of buyers, however, with the continuous expansion of the market and the increase of competition, companies have to adjust their commodity prices according to the market. So how to adjust the price of goods to maximize the profit sellers gain has become one of the market issues that everyone is interested in. Nobel economist Richard Saylor put forward the "mental accounting theory", this theory believes that people separate money in different fields. Different product pricing will subconsciously inspire people to associate two different accounts, one is the economic account in reality, and the other is the psychological account in the brain. For example, many people pay close attention to which discount is the best deal when they are buying things online, but they don't think too much about price discounts when buying luxury goods. Because consumers' perception of price does not depend on rational judgment in most cases but on psychological feelings during the purchase process. If a

cup of coffee with a regular price of 20 dollars is discounted to 10 dollars, people may buy this cup of coffee specifically for this discount. However, if it is to buy a car, people will not choose to buy it because the car is 10 dollars cheaper but refers to more factors. They are both 10 dollars cheaper, but buyers have completely different attitudes towards the two products. Thinking in terms of economic accounting, both of the transactions saving 10 dollars, people should take the same action, but the result is not as people think. So how can people use this phenomenon to help determine the strategies on the price of the product? The research paper would introduce some of the solutions by combining Weber's law and Mental Accounting.

## 2. Literature Review

The famous economist Weber once proposed the concept that consumers can judge according to the relative change of stimulus intensity, and deduced the calculation formula:  $\Delta I$  (difference threshold)/ $I$  (standard stimulus intensity) =  $k$  (constant/Weber fraction) [2]. When this physics formula is applied to marketing, it also means that product judgments that influence people's purchase decisions do not depend entirely on how cheap it is, but on the ratio of the price change to the original price. Mental accounting is when a person assigns different values to the same amount of money based on subjective criteria, often with detrimental results. It was proposed by economist Richard Thaler, Richard believes that individuals classify funds differently, so it is easy to make irrational decisions in consumption and investment behaviors [3]. When conducting transactions, the buyer's judgment on the price is irrational, and more judgments come from their own mentality. Taking advantage of this psychology, merchants can make many strategies to attract buyers to spend.

In terms of regarding price adjustments, which is price increases or price reductions. Pricing decisions can have very significant consequences for the organization. Price stabilization for customers can bring potential benefits [4]. It is one of the first considerations for many customers and it determines the profit margin on products. So, try to ensure the interests of customers when making price adjustments, or not let customers be aware of their losses. According to the law of demand, if the price decreases, quantity demanded increases. However, if the price decreases too much, the profit will therefore be lost. When finding the right price, the fact of the product price reduction should be amplified, so that customers can realize the product price reduction. Thus, the key should be finding which form can shake the hearts of customers with discounts or with price reductions.

As for the sales method, when people divide money in their minds, blurring the boundaries of these divisions and making products as close as possible to multiple fields is one of the ways to increase sales. Understanding mental accounting is important because people will show what customers care about how and why customers make purchases [5]. The rapid development of technology makes many things can be handled through the Internet, and sales transactions are no exception. According to the figure1, In April 2021, 92% of U.S. consumers shopping online used a marketplace. Much of this shopping was done on major e-commerce sites like Amazon and eBay, at 74% and 48%, respectively. //This means that the online market is gradually expanding, but the sales method will not disappear due to changes in channels, so merchants should also apply their products to the online market to increase sales. Therefore, this study takes Coca-Cola as an example, and summarizes four strategies to determine commodity prices based on buyers' perceptual judgments on commodities.

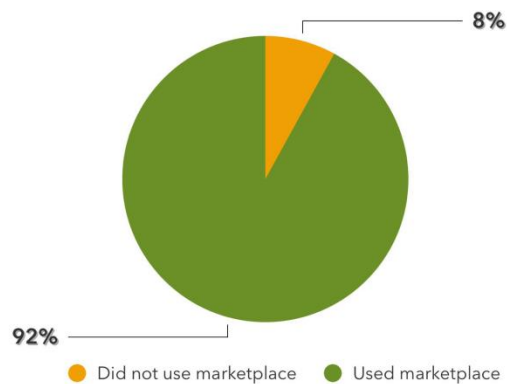


Figure 1: U.S. Consumer who used a marketplace for online shopping.

### 3. Weber's Law in Coca-Cola's Marketing Strategy

Since 1990, the price of Coca-Cola's products in the Chinese market has not seen a significant increase. From 1990 to 2019, the compound growth rate of the unit price of Coca-Cola's products was only 0.42%. In 2008, Coca-Cola reduced the capacity of bottled Coke from 600 ml to 500 ml in the name of "Green Olympics". Under the condition that the price remains unchanged, this is an indirect price increase, but Coca-Cola's sales volume in the Chinese market continues to increase, with an annual growth rate of about 6.4%. On March 28, 2022, Zaker released the official Coca-Cola limited-time promotion: 10% off for orders of 330ml\*20 cans. In shopping software such as Amazon and Taobao, it will show that in stores that sell Coca-Cola, there will be a certain amount of discount for purchasing 12 bottles or more at one time.

In the above example, different sales strategies were used: raising or lowering the price. Use different sales channels: online or offline. And different types of promotions: discounts or price reductions by a specific amount. These will act on the psychological feelings of buyers. In the case of satisfying the seller's profit as much as possible, maximizing sales will be an important way to obtain the maximum benefit. Mental accounting and Weber's law will be the main research methods for this research on prices. The focus is on analyzing the psychology of consumers' consumption, and minimizing the pain of their consumption, so as to bring greater satisfaction.

#### 3.1. Literature Analysis Method

Although the sales volume of Coca-Cola in the Chinese market has increased indirectly, the sales volume has continued to grow. The reason is that people do not have much stimulation and awareness of changes in product capacity. Yu Yaodong once mentioned that buyers' sensitivity to consumer prices depends on their understanding of price trends [6]. In the calculation of Weber's law, there is a definition called the difference threshold, which is the point at which customers notice changes in the price, features, or other aspects of the product or service [7]. Therefore, finding people's response to price changes, that is, the difference threshold, will be one of the key factors to determine whether price adjustments can meet customer satisfaction. When raising product prices, in order to make it difficult for customers to notice, it is also necessary to lower the difference threshold, and strive to find the absolute threshold, that is, the lowest point at which individuals can experience sensations. Just like Coca-Cola in the Chinese market, each price change is very small, so it is lower than people's difference threshold. This can also be applied to other markets, such as formulating a long-term price increase plan, dividing the plan into several stages,

and increasing prices slightly in each stage, so that consumers will not care too much about price increases.

### 3.2. Discount Strategy

When the price is reduced or discounted, it is the key to increase sales to attract customers' attention as much as possible and to amplify customers' sensitivity to price changes. According to Guan Zhenzhong's analysis experiment on market price, it is finally concluded that optimal pricing and inventory are related to price sensitivity, and retailers should adopt the strategy with the highest customer preference as the optimal strategy [8]. The price of electronic equipment is usually relatively high. Therefore, consumers are much more sensitive to price cuts than to discounts during discounts. For example, a \$100 price cut on a \$10,000 electronic device is clearly more likely to attract a customer's attention than a 99% discount. When buying low-priced products such as stationery, price cuts are obviously not so attractive. Then it will be more favorable for consumers to buy products with a 20% discount. For example, on Chinese shopping software, people will directly get a discount coupon of 50 dollars for purchases of 600 dollars or more when they are buying Coca-Cola. And when they only buy a box of drinks, the software will tell the buyer that this is a 20% discount.

From the above summary, people's sensitivity to commodity prices does not depend entirely on the price itself, but on people's sensitivity to prices. So what the seller has to do is to maximize people's sensitivity to the product and promote people's desire to consume.

### 3.3. Sales strategy

If the consumer's sensitivity to price does not depend entirely on the number itself but on their sensitivity or satisfaction with the product, then sellers can use this and mental accounting to sell their products to customers, thereby increasing sales. According to mental accounting, people do not think of value in absolute terms. Instead, an object's value is relative to various other factors [9]. Mental accounting explains how people tend to assign subjective value to money, often in ways that violate basic economic principles. Although money has a consistent, objective value, how people spend it is often governed by different rules, depending on how they earn it, how they plan to use it, and how it makes them feel [3]. When selling products or making sales promotions, sellers should try to make buyers associate products to different fields. For example, if the sale of health care products is only for medical treatment or medicine, then consumers will not have a high desire to buy. But if it is associated with the family, such as: buying health care products, it can make the family members healthier and improve family happiness. Or buying health care products as gifts to business partners to promote exchanges between the two parties. Products that were originally only in the category of pharmaceuticals are associated with the category of work and home, so the customer's mental accounts will allocate more money.

Figure 2 is from MiKinney company provides US spending growth by categories and channels. According to Figure 2, the information can be drawn from the icon: people's expenditure on necessities of life is relatively high, such as grocery stores, home; spending on entertainment is second, such as travel, restaurants [10]. Therefore, when describing products, try to get as close as possible to these fields, so that the mental accounting of consumers can allocate more budget to products.

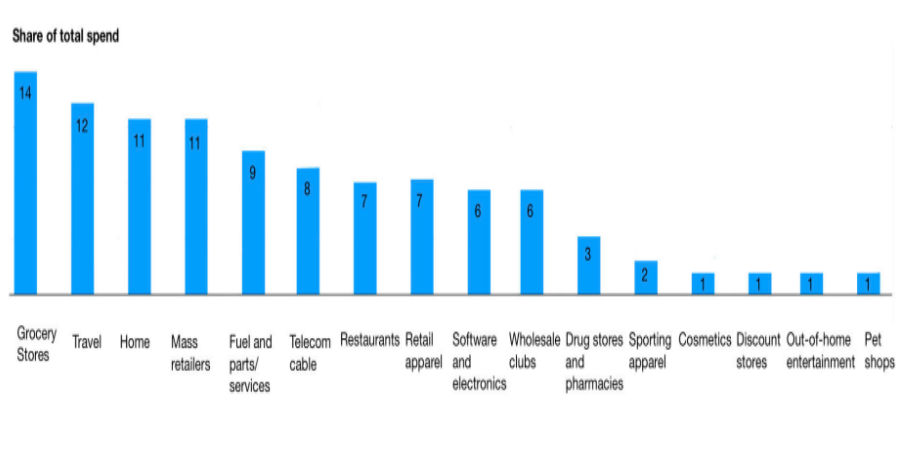


Figure 2: U.S. spending growth by categories.

### 3.4. Sales Channel Strategy

According to the above example of Coca-Cola offline shopping, it will be found that the change percentage of the sales volume of cola is smaller than that of the items purchased on the Internet. One of the reasons is the sales channel. When consumers purchase products, they regard traditional currency as the traditional expenditure of mental accounting, which means that the expenditure will be more cautious and the expenditure will bring a higher degree of sensitivity [11]. In comparison, online coupons, coupons, red envelopes, etc., as non-traditional currencies of mental accounting, are relatively less sensitive to consumers. Therefore, with these online discounts, consumers will be more inclined to online shopping. Because this type of spending does not stimulate consumption much, in other words, it causes less pain than spending in traditional currencies. Because online channels bring a lot of convenience to customers, and customers will not bring more pain to consume online, the sales volume of online products will be more elastic.

This is the Worldwide E-commerce Sales in 2021 and 2022 according to Cloud wards statistics. From Figure 3, the year 2021 saw annual retail e-commerce sales pass \$4.9 trillion worldwide, and eMarketer predicts it will grow to over \$5.5 trillion by the end of 2022.<sup>17</sup> That's more than the GDP of Germany (approximately \$4.2 trillion in 2021) and Japan approximately \$5.1 trillion in 2021). In markets with increasing volume and price pressure, the right marketing approach is essential to remain competitive. It brings people the value they deserve for the products and services offered and secures the profits they need to invest in change and growth [7].



Figure 3: Worldwide E-commerce sales in 2021 and 2022.

The rapid increase in the number of users of online channels, as well as the less pain brought about by online shopping, all illustrate the status of it in future transactions. Using online channels to sell products will increase exposure and sales to a certain extent.

#### 4. Conclusion

However, mental accounting and Weber's law are both derived from the consumer's psychological illusion. It is just the result of economists using statistics, not for every consumer group. Therefore, when applying, it should be determined whether these laws follow these principles for consumers. But these laws are still useful to most consumers in the market. Coca-Cola has achieved long-term progress and success in the Chinese market, the main reason is also inseparable from the sales channels, sales methods, and price change strategies analyzed above. And these methods can not only be applied to their own market, but also can be used as a reference for other businesses to learn. In a market with increasing volume and price pressures, the right approach to pricing is essential to remain competitive. It brings customers the value they deserve in the products and services they deliver, and ensures they earn the profits they need to invest in change and growth. In the judgment of price adjustment, people's sensitivity to price will play an important role. Mastering the absolute threshold and difference threshold of the consumer will play a role in the return of price adjustments. As a consumer, people should avoid impulsive consumption due to misunderstandings caused by these psychologies, analyze rationally, and understand the specific information of the product before making a purchase, so as to avoid being tricked by the merchant and protect their own interests.

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